

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (currently amended) A cryogenic pipeline comprising:

a bulkhead having an inner transition element, and a first and a second outer transition element coupled to and at least partially surrounding the inner transition element;

wherein the inner transition element is coupled to and between a first cryogenic pipeline and a second cryogenic pipeline to thereby form ~~forms~~ a continuous conduit that ~~is configured to allow~~ allows transfer of a cryogenic product from the ~~the~~ [[a]] first cryogenic pipeline through the inner transition element to the ~~the~~ [[a]] second cryogenic pipeline; and

wherein the first and second outer transition elements are ~~coupled to configured to allow coupling of~~ a first and a second jacket pipeline respectively, and wherein the first and second outer transition elements are coupled to the first and second cryogenic pipelines via the inner transition element, respectively, to thereby allow transfer of, respectively, such that thermal stress load in the first and second cryogenic pipelines ~~is transferred~~ to the first and second jacket pipelines, respectively.
2. (original) The pipeline of claim 1 wherein the inner transition element has a pipe configuration with an inner diameter that is substantially identical to an inner diameter of the first and second cryogenic pipelines.
3. (original) The pipeline of claim 1 wherein at least one of the outer transition elements has an outer diameter that is substantially identical to an outer diameter of the first and second jacket pipelines.
4. (original) The pipeline of claim 1 further comprising a sleeve disposed in a space between the first and second outer transition elements.

5. (original) The pipeline of claim 1 wherein at least one of the inner transition element and the first and second cryogenic pipelines are at least partially enclosed by an insulating material.
6. (previously presented) The pipeline of claim 1 further comprising an external insulation that covers the first and second outer transition elements.
7. (previously presented) The pipeline of claim 1 wherein the inner transition element and the outer transition elements are contiguous.
8. (original) The pipeline of claim 1 further comprising a weight coating coupled to at least one of the first and second jacket pipelines.
9. (currently amended) A field joint for a cryogenic pipe-in-pipe pipeline,
in which an inner portion of the field joint is configured to allow ~~fluidly~~ coupling of a first and a second section of a product conduit of the pipeline to opposite ends of the inner portion, respectively, such that a fluid can flow from the first section of the product conduit through the inner portion to the second section of the product conduit,
in which an outer portion of the field joint is configured to allow coupling together of a first and a second section of a jacket of the pipeline to opposite ends of the outer portion, respectively, and
in which inner and outer portions of the field joint are coupled together such that a contraction force ~~thermal stress-load~~ from the first and second sections of the product conduit is converted into a compression force ~~is transferred~~ to the first and second sections of the jacket in the pipeline, respectively.
10. (original) The field joint of claim 9 wherein the outer portion is separated into two ring-shaped elements that are coupled to the inner portion via an angled connector.
11. (original) The field joint of claim 10 wherein a sleeve is disposed in a space between the two ring-shaped elements.

12. (original) The field joint of claim 9 further comprising insulating material coupled to at least one of the product conduit and the inner portion.
13. (original) The field joint of claim 9 further comprising insulating material that covers the outer portion to form an external insulation.
14. (previously presented) The field joint of claim 9 wherein the inner and outer portions are configured to form a single piece.
15. (withdrawn) A method of coupling first and second pipe-in-pipe pipelines, comprising:

providing a field joint having an inner portion and an outer portion;

fluidly coupling the inner portion to a first and a second section of a product conduit in a pipe-in-pipe pipeline;

coupling the outer portion to a first and a second section of a jacket in the pipe-in-pipe pipeline; and

wherein the step of fluidly coupling and coupling is performed such that the inner and outer portions cooperate to transfer thermal stress loads from the first and second sections of the product conduit to the first and second sections of the jacket in the pipe-in-pipe pipeline, respectively.
16. (withdrawn) The method of claim 15 wherein the pipe-in-pipe pipeline is a cryogenic pipe-in-pipe pipeline.
17. (withdrawn) The method of claim 15 wherein the step of fluidly coupling comprises welding.
18. (withdrawn) The method of claim 15 further comprising a step of coupling insulation material to at least one of the first and a second section of the product conduit.
19. (withdrawn) The method of claim 15 further comprising a step of coupling a spacer to at least one of the first and a second section of the product conduit to maintain a distance between the product conduit and the jacket.

20. (withdrawn) The method of claim 15 further comprising a step of coupling a weight to at least one of the first and second section of the jacket.